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## REMARKS ON *MURICODRUPA* IREDALE, 1918 (MURICIDAE: THAIDINAE), WITH THE DESCRIPTION OF A NEW SPECIES

William K. Emerson

American Museum of Natural History  
New York, New York 10024

and

Anthony D'Attilio

Natural History Museum  
San Diego, California 92112

### ABSTRACT

*Muricodrupa jacobsoni*, a new species known only from Melanesian populations (Bismarck Archipelago, Solomon and Fiji Islands), is described and dedicated to the late M. K. Jacobson. Radular and opercular figures are provided for *Muricodrupa fenestrata* (Blainville, 1832), and *M. funiculus* (Wood, 1828). A lectotype of *Murex margariticola Broderip* is selected and illustrated, and considered to be a junior synonym of *Cronia fiscella* (Gmelin, 1791).

The classification of the numerous species-group taxa with *Morula*-like shell characters has long presented problems to students of muricean gastropods. The thaidid genus *Morula* Schumacher, 1817, remains a genus-group receptacle for numerous, small, non-spinose forms with denticulate apertures without regard for the limitations dictated by the characters of the type species, *Drupa uva* Röding, 1798 (cf. Radwin and D'Attilio, 1972). Recent investigations on the radulae of various moruloid species, including those of Arakawa, 1962, 1965; Cernohorsky, 1969; Emerson, 1968, Emerson and Cernohorsky, 1973; Radwin and D'Attilio, 1971, 1972; Wu, 1965, 1968, and others, have advanced the morphological knowledge of these rachiglossate gastropods. The basic familial and subfamilial classification of the Muricea, however, remains in a state of

flux. Some workers largely ignore the radular characters and rely mostly on shell morphology for defining familial-level groups. Such is the case for the thaidid taxa. Some workers separate the Thaididae from the Muricidae, while others recognize subfamilial rank within the Muricidae for the thaidine taxa (see summary by Cernohorsky, 1969, p. 293).

The new species described below belongs to a small group of Indo-Pacific taxa characterized by shells possessing deeply pitted, squarish interspaces formed by the junction of the axial and spiral ribs. In the absence of knowledge on its radular morphology, the present species is tentatively referred to the genus *Muricodrupa* Iredale, 1918, for which the radular dentition of the type species is described and illustrated.

We name this new species in the cherished memory of a longtime friend and valued col-

league, Morris Karl Jacobson (1906–1980), in recognition of his many and varied contributions to the field of malacology.

**Family Muricidae Rafinesque, 1815**

**Subfamily Thaidinae Suter, 1909**

**Genus *Muricodrupa* Iredale, 1918**

*Muricodrupa* Iredale, 1918, p. 38; Thiele, 1929, p. 295; Wu, 1968, p. 90, radular drawings of "*Muricodrupa elongata* [sic] (Blainville)" pl. 4, figs. 4, 5.

Type species by original designation: *Purpura fenestrata* Blainville, 1832, p. 221, pl. 10, fig. 11. Synonyms: *Murex cariosus* Wood, 1828, Suppl. p. 15, *Murex* pl. 5, fig. 22 [not Linné, 1767, p. 1220]; *Purpura* "alongée" [vernacular for *elongata*] Blainville, 1832, pl. 10, fig. 9, fig. only [nomen nudum]; *Purpura cancellata* Quoy and Gaimard, 1833, vol. 2, p. 563, atlas (2), pl. 37, figs. 15–16 [not Röding, 1798, p. 143]; *Ricinula elongata* Reeve, 1846, *Ricinula* no. 25, pl. 4, fig. 25.

Radular characters of type species: Five cusps on the rachidian tooth, with central cusp narrow and long, lateral cusps about  $\frac{3}{4}$  the length of the central cusp, intermediate cusps small and located near the laterals (figs. 5a, 5c); lateral tooth large and normally hooked (fig. 5b).

Opercular characters of type species: Outline broadly unguiculate, margin thickened on one side, central area depressed, with irregular raised, concentric rings on the interior surface (fig. 7b).

***Muricodrupa jacobsoni*, n. sp.**

Figs. 1–4

*Description*—Shell moderately large for genus, attaining 35\* mm in height, low spired; nature of protoconch unknown (eroded off specimens); suture weakly defined and interrupted by varical buttresses; whorls 4\*, weakly convex, shouldered, spire short, blunt. Aperture narrowly ovate, inner lip mostly adherent, outer lip finely fluted, ornamented with 6 well-defined, evenly spaced denticles, set slightly back from apertural margin, with the lowest denticle above the entrance to canal and the uppermost denticle below the shoulder area; anal trough with a prolonged sinus extending above the shoulder, delineated within on the left side by a

minor denticle and on the right side by a swollen and more prominent denticle isolated above the 6 lower denticles; canal, broad, mostly open, tapering and recurved distally, siphonal fasciole coarsely sculptured with previous canal terminations; pseudo-umbilical pit present. Sculpture consisting of 6 varices with visibly defined varical margins, rounded with equal or wider interspaces, varices crossing the angulate shoulder slightly oblique and forming buttresses against the previous whorl; shoulder deeply excavated in the interspaces; varices with low, scabrous lamellae on varical leading surface; number of costae increasing by one or two on the spire; 3 primary spiral cords situated on the body, along with an occasional secondary cord; a major cord in concave area below the body; canal with one major cord, supplemented with minor or secondary cords; spiral sculpture crossed by lamellose growth striae, scabrously ornamented where not abraded.

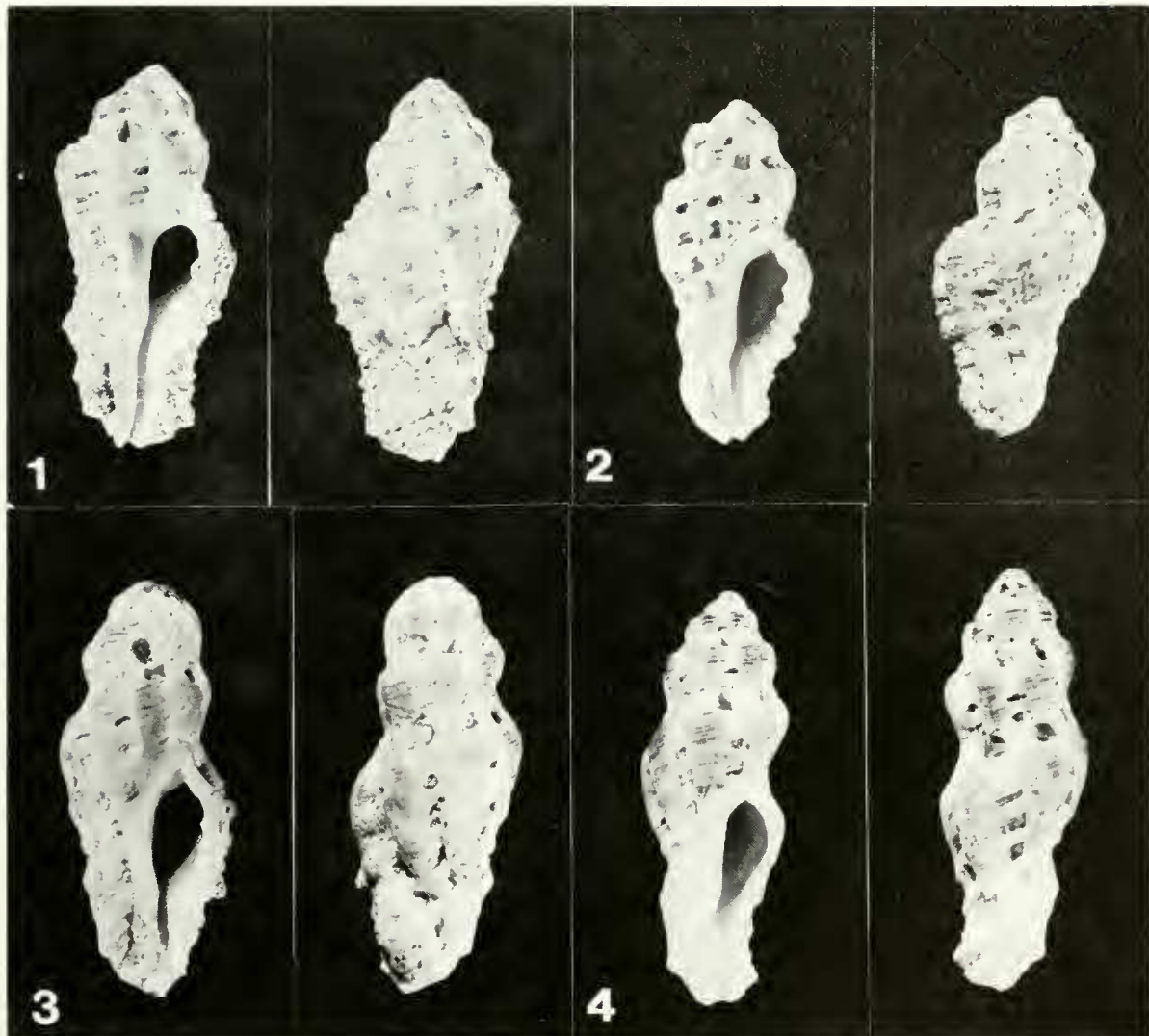
*Shell color*—matte white, apertural interior white in holotype, tinged with pale violet in paratypes.

*Type-locality*—Astrolabe Barrier Reef, Yanu-yanu-i-lona Island, Fiji Islands (19°55'S, 178°35'E), Kauter and Williamson, 1971.

Holotype from type locality, LACMNH no. 71–205; measurements 35.5 mm in height, 16.9 mm in width; fig. 1. Other material examined: Paratype A, fig. 2, AMNH 201460 (ex-Tulane University, Department of Geology), Manus Island, Bismarck Archipelago; 31.5 mm in height, 16.8 mm in width. Paratype B, fig. 3, SDNHM Type No. 76523, Nudha Island, Solomon Islands, American Mela Expedition Station 18; 38.5 mm in height, 20.2 mm in width. Paratype C, Billee Mabry, June–July, 1978, Billee Mabry Collection, same locality as for Paratype B; 37.2 mm in height, 17.9 mm in width. Paratypes D and E, Guadalcanal, Solomon Islands; paratype D, 36.3 mm in height, 17.1 mm in width; paratype E, fig. 4, 37.8 mm in height, 13.4 mm in width, Thora Whitehead Collection.

**DISCUSSION**

The new species, together with its species-group congeners, is characterized by the prominent cavernous excavations between the varical

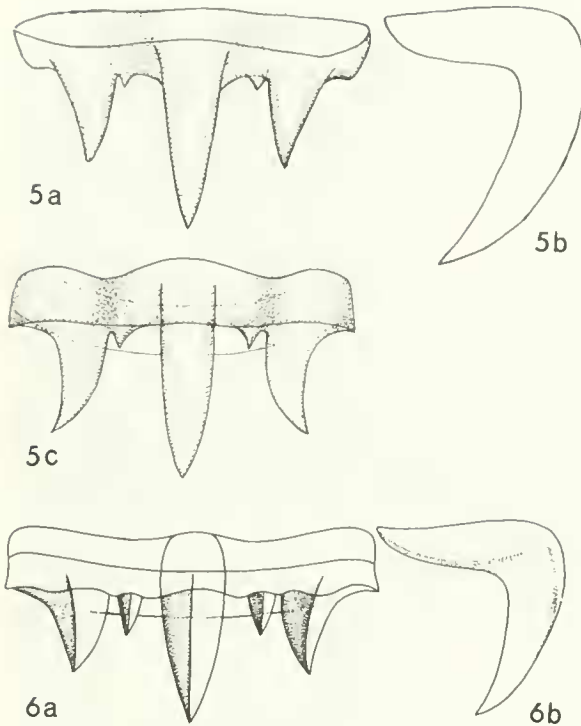


FIGS. 1-4. *Muricodrupa jacobsoni*, n. sp., all  $\times 1\frac{1}{2}$ . 1, holotype, Yanu-yanu-i-loma Island, Fiji Islands, LACMNH 71-205. 2, paratype A, Manus Island, Bismarck Archipelago, AMNH 201460. 3, paratype B, Nudha Island, Solomon Islands, Billee Mabry Collection. 4, paratype E, Rove, Guadalcanal Island, Solomon Islands, Thora Whitehead Collection.

and spiral ridges, which form squarish pits. It is readily distinguished from its closest relatives by the extended narrow form of the shell, the blunt spire and broad canal.

The new species has been confused with *Muricodrupa funiculus* (Wood, 1828, p. 15, *Murex* pl. 5, fig. 17), locality unknown; radula and operculum here illustrated, figs. 6a, b; 8a, b. We consider *Muricodrupa decussata* (Reeve, 1845, *Murex* species 153, pl. 31, fig. 153), "Island of

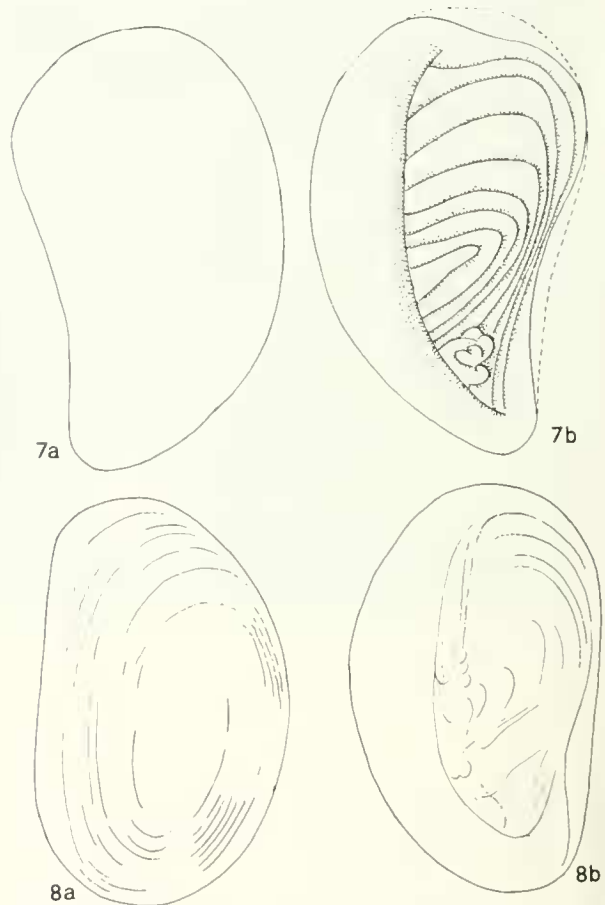
Bohol, Philippines," type specimens not located in the BM(NH) *teste* J. H. McLean and *Muricodrupa triangulata* (Pease, 1868, p. 278, pl. "23a", fig. 15, "Insl. Hawaii") to be junior synonyms of *Muricodrupa funiculus* (Wood, 1828). Compared to the new species, Wood's taxon has an essentially triangular form, is broad at the shoulder relative to height, has a more spinose shoulder carina, and has three denticles anteriorly positioned on the columella.



FIGS. 5a-5c. Radular dentition of *Muricodrupa fenestrata* (Blainville), greatly enlarged; SW Rarotonga Island, Cook Islands, ANSP 278974. 6a-6b, Radular dentition of *Muricodrupa funiculus* (Wood), greatly enlarged; Rodda Reef, Queensland, Australia, SDSNH 51212.

Kay (1979, p. 238, fig. 831) assigned *Muricodrupa triangulata* (Pease) to the synonymy of *Muricodrupa funiculus* (Wood). Cernohorsky (1969, p. 311, pl. 49, fig. 25), however, referred Pease's taxon to the synonymy of *Morula* (*Cronia*) *fiscella* (Gmelin, 1791, p. 3552, no. 160), but his figured specimen represents an example of *Muricodrupa funiculus* (Wood). Cernohorsky's nomenclatural interpretation of the identity of *Murex fiscellum* Gmelin was based on the figure citations by Gmelin (1791, p. 3552) to Chemnitz's (1788, vol. 10, pl. 160, figs. 1524, 1525) illustrations and on the descriptive text. Chemnitz's text (*op. cit.*, p. 242) describes the shell as being "... strongly clathrate with deeply recessed windows (depressions) which are coloured brown", and Cernohorsky (1969, p. 311) concluded that the "... description and figure [*sic*] are only applicable to *M. fiscella* not to *M. margariticola*." The figures of Chemnitz, how-

ever, lack squarish windows, whereas the coloration and sculpture are much closer to *Morula margariticola* (Broderip, 1833, p. 177), as figured by Cernohorsky (1969, p. 312, pl. 49, fig. 26, and 1972, pl. 128, pl. 36, fig. 8). Cernohorsky (1978, p. 69, pl. 20, fig. 5) illustrates what appears to be a specimen of *Morula margariticola* (Broderip, 1833) (our concept of *fiscella* Gmelin) under the name (*Cronia crassulnata* (Hedley, 1915), and he (1978, p. 70, pl. 20, fig. 6) illustrates a specimen of *Muricodrupa funiculus* (Wood, 1828) as *Cronia triangulata* (Pease, 1868), which he suggests may prove to be an extreme form of *Cronia fiscella* (Gmelin, 1791).



FIGS. 7a-7b. Opercular characters (7a, outer surface; 7b, inner surface) of *Muricodrupa fenestrata* (Blainville), greatly enlarged; Truk Lagoon, Moen Island, Caroline Islands, SDSNH 76524. 8a-8b, Opercular characters (8a, outer surface; 8b inner surface) of *Muricodrupa funiculus* (Wood), greatly enlarged; Palmyra Island, Line Islands, SDSNH 24188.

It is our view that *Murex fiscellum* (Gmelin, 1791) should be based on the drawings of Chemnitz (*op. cit.*), which lack any indication of squarish, window-like depressions, and, in the absence of the type specimens, should represent the typological concept of Gmelin's species. Moreover, the descriptive text of Chemnitz (*op. cit.*) could reasonably be applied to several other moruloid species with squarish pits, such as the type species of *Muricodrupa*, *Purpura fenestrata* Blainville, 1832. Therefore, we interpret *Murex fiscellum* Gmelin to be referable on the basis of Chemnitz's illustrations (*op. cit.*) to the common and wide-ranging Indo-Pacific species subsequently described as *Murex margariticola* Broderip, 1833, p. 177; Reeve, 1846, *Murex* species 178, pl. 34, fig. 178; syntype here illustrated, fig. 9.

This interpretation agrees with the concept of *Murex fiscellum* Gmelin arrived at by Lamarck (1822, p. 346), Blainville (1832, p. 206, pl. 10, fig. 8), and Reeve (1846, *Ricinula* sp. 28, pl. 4, fig. 28), who would qualify as the First Revisor under Article 24 of the International Code of Zoological Nomenclature of the International Congress of Zoology.

In summary, *Muricodrupa jacobsoni*, n. sp. is most closely related to *M. funiculus* (Wood, 1828), [synonyms: *Murex decussatus* Reeve (1845, *Murex* species 153, pl. 31, fig. 153); *Purpura stellaris* Hombron and Jacquinot (1853, atlas, pl. 22, figs. 13, 14); *Coralliophila con-*

*fragosa* H. and A. Adams (1864, p. 432), and *Sistrum triangulatum* Pease (1868, p. 278, pl. 23, fig. 15)]. Whereas *Cronia fiscella* (Gmelin, 1791), [synonyms: *Murex margariticola* Broderip (1833, p. 177), *Purpura thiarella* Quoy and Gaimard (1833, p. 571, pl. 39, figs. 4-6) [not Lamarck, 1822, p. 246], [?] *Thais crassulnata* Hedley (1915, p. 749, pl. 85, fig. 90), and *Morula rhyssa* Dall (1923, p. 304, a new name for *Ricinula fiscella* Reeve, 1846)], with which the new species also has been confused, is a distinctive species. The type species of the genus-group taxon *Cronia* H. and A. Adams, 1853, *Purpura amygdala* Kiener (1835), apparently has radular morphology (Cooke, 1919, fig. 33) similar to that of the type species of *Muricodrupa*.

#### ACKNOWLEDGMENTS

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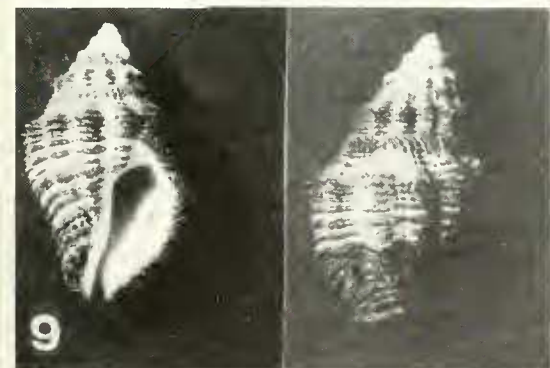


FIG. 9. *Murex margariticola* Broderip, one of three syntypes in *The British Museum (Natural History)*,  $\times 1\frac{1}{2}$ ; this specimen is selected as the lectotype. It is a junior synonym of *Cronia fiscella* (Gmelin, 1791).

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## NEW RECORDS OF LAND MOLLUSCA IN NEW YORK CITY

Bruce Einsohn

Department of Physical Sciences  
Kingsborough Community College  
Brooklyn, NY 11235

*Cecilioides acicula* (Müller), a small achatinid snail, has been found in Inwood Hill Park at the extreme northern end of Manhattan Island in New York City. This is the first reported occurrence of this species in New York State.

Specimens of *C. acicula* were discovered along a rocky ridge where the snails were found attached to the undersides of bricks from the

ruins of what appears to have been a greenhouse. At this site nine species of shelled pulmonates, in addition to the *Cecilioides*, were found within a few square feet: *Cochlicopa lubrica* (Müller), *Euconulus fulvus* (Müller), *Hawaiiia minuscula* (Binney), *Helicodiscus parallelus* (Say), *Orychilus cellarius* (Müller), *O. draparnaldi* (Beck), *Pupoides albilabris*